DUBROVSKIY, A., kandidat tekhnicheskikh nauk.

Instruments for technical measurements in the machine-tractor station, their verification and storage. Tekhsov.MTS 15 no.2: 1-14 Ja '54. (MLRA 7:2)

1. Vsesoyuznyy institut mekhanizatsii sel'skogo khozyaystva.
(Measuring instruments)

DUBROVSKIY, A.A.

[Honorary academician V.P. Goriachkin, the founder of agricultural mechanics; on the twentieth anniversary of his death] Osnovopoloshnik zemledel'cheskoi mekhaniki, pochetnyi akademik V.P. Goriachkin (k dvadtsatiletiiu so dnia smerti). Moskva, Ministerstvo sel'skogo khoziaistva SSSR, 1955. 25 p. (MIRA 12:1)
(Goryachkin, Vasiliy Prokhorovich, 1868-1935)

DUBROVSKIY A.A.

DUBROVSKIY, A.A., kand.tekhn.nauk.

From primitive tools to over-all mechanization. Izobr.v SSSR 2 no.11:20-25 N '57. (MIRA 10:10)
(Agricultural engineering)

Dubrovskiy, A.A.

DUBROVSKIY, A.A., kand.tekhn.nauk

Outstanding scientist and inventor V.P.Goriachkin; on the occasion of his 90th birthday. Izobr.v SSSR 3 no.1:48 Ja '58. (MIRA 11:1)

(Goriachkin, Vasilii Prokhorovich, 1868-1935)

DUBROVSKIY, Aleksey Alekseyevich; ARTOBOLEVSKIY, I.I., red.

[Academician V.P.Goriachkin; a biographical account] Akademik V.P.Goriachkin; biograficheskii ocherk. Pod red. I.I.Artobolevskogo. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1960. 140 p. (MIRA 14:7)

(Goriachkin, Vasilii Prokhorovich, 1868-1935)

DUBROVSKIY, Aleksey Alekseyevich, kand. tekhn. nauk; LEONOVA, T.S., red.; RAKITIN, I.T., tekhn. red.

[Present-day problems of agricultural engineering] Sovremennye problemy sel'skokhoziaistvennoi tekhniki. Moskva, Izd-vo "Znanie," 1961. 46 p. (Vsesoiuznoe obshchestvo po rasprostraneniiu politicheskikh i nauchnykh znanii. Ser.5, Sel'skoe khoziaistvo, no.15) (MIRA 14:9)

(Agricultural engineering)

DUBROVSKIY, Aleksey Alekseyevich [Dubrove'kyi, O.O.], kand.tekhn. nauk; MUSNIK, N.Y.[translator]; MATVIICHUK, O.A., tekhn. red.

[Present-day problems of agricultural technology] Suchasni problemy sil's'kohospodars'koi tekhniky. Kyiv, 1961. 52 p. (Tovarystvo dlia poshyrennia politychnykh i naukovykh znan' Ukrains'koi RSR. Ser.5, no.22) (MIRA 15:2)

(Agricultural machinery)

DUBROVSKIY, A.A., kand. tekhn.nauk; OEL'FENBEYN, S.P., insh.

Using negative feedback for improving the efficiency of machinery. Mekh. i elek. sots. sel'khoz. 19 no.3:30-32'61. (MIRA 4:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva.
(Agricultural machinery)

DUBROVSKIY, A.A. (Moskva, Ochakovo, ul. Lenina, d.21, kv.57)

External respiration in various stages of thyrotoxicosis and the formation of Basedow's disease, Vest.khir. no.1:40-45 '62. (MIRA 15:1)

1. Iz gospital'noy khirurgicheskoy kliniki (zav. - prof. V.S. Myart) 2-go Moskovskogo meditsinskogo instituta im. N.I. Pirogova.

(THYROID GLAND—DISEASES) (RESPIRATION)
(GRAVES' DISEASE)

DUBROVSKIY, A.A., kand.tekhn.nauk

Using vibration for the reduction of traction resistance in machinery. Vest. AN SSSR 32 no.1:59-61 Ja '62. (MIRA 15:1)
(Agricultural machinery) (Vibration)

BOTOV, Tikhon Grigor'yevich, insh.; DUBROVSKIY, A.A., red.; STAROVA, A.I., red.; LOGINOVA, Ye.I., tekhn. red.

[Equipment for the rearrangement of soil horizons] Novye orudiia dlia pereraspredeleniia pochvennykh gorizontov. Pod obshchei red. A.A.Dubrovskogo. Moskva, Izd-vo M-va sel'khoz.RSFSR, 1959. 26 p. (Materialy zaochnogo lektoriia po tsiklu "Novoe v mekhanizatsii sel'skogo khoziaistva," no.13) (MIRA 16:3)
(Agricultural machinery)

DUBROVSKIY, A. A., kand. tekhn. nauk; GEL'FENBEYN, S. P., inzh.

Some problems concerning the automation of mobile agricultural machines. Mekh. i elek. sots. sel'khoz. 20 no.6:21-25 '62. (MIRA 16:1)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut mekhanizatsii sel'skogo khozyaystva.

(Automation) (Farm mechanization)

DUBROVSKIY, A.A., doktor tekhn. nauk

Theoretical problems in the field of agricultural machinery; conference in Moscow. Vest. AN SSSR 35 no.9:105-106 '65. (MIRA 18:9)

DUBROVSKIY, A.F., kandidat tekhnicheskikh nauk.

Theory of friction joints and experimental tests concerning it. Trudy NIIP no.82/83:398-431 '55. (MLRA 9:8)
(Friction) (Couplings)

DUBROVSKIY, A. F.

DUBROVSKIY, A. F. "Friction Joints." Min Railways USSR. Moscow Order of Lenin and Order of Labor Red Banner Inst of Railroad Transport Engineers imeni I. V. Stalin. Moscow, 1956. (Dissertation for the Degree of Doctor in Sciences of Technical Sciences)

So: Knizhaya Letopis', No. 17, 1956

DUBROVSKIY, A.F.

DUBROVSKIY, A.F., kand. tekhn. nauk.

Calculating bolted joints loaded by moments in the junction planes. Vest. mash. 38 no.1:33-36 Ja '58. (MIRA 11:1)
(Bolts and nuts)

DUBROVSKIY, A.F., dotsent

Smooth friction joints. Trudy MIIT no.97:83-117 '58. (MIRA 11:8)

(Fastenings) (Friction)

DUBROVSKIY, A.F., dotsent

Effect of some parameters of worm gears on their efficiency.
Trudy MIIT no.97:118-124 '58. (MIRA 11:8)
(Gearing)

DUBROVSKIY, A.F., doktor tekhn.nauk, prof.

Torsion of the rods of bolted joints. Trudy MIIT no.175:135-145 '63. (MIRA 16:12)

DUBROVSKIY, A.F., prof. doktor tekhn. nauk

Analyzing the formulas of the contact strength of gear transmissions. Trudy MIIT no.195:104-111 '64.

Work of bolts in holes with a gap under the action of tangential loads. Ibid.:112-124 (MIRA 18:9)

DUBROVSKIY, A.F., doktor tekhn.nauk, prof.

Fitting stresses in the key joints and the misalignment in the gear transmissions connected with them. Trudy MIIT no.200:87-94 '64. (MIRA 18:8)

Ca

4

Electrolytic zinc plating. A. I. Uzhevskii and V. M. [illegible]. *Vestnik Elektrotekhn.* 1939, No. 1, 43; *Khim. Referat. Zhur.* 1939, No. 10, 137.—The protective qualities of Zn on Fe are due to the galvanic couple Fe-Zn in which Zn is the anode. Upon attack of corrosive agents the Zn layer dissolves leaving Fe unchanged. Optimum compos. of the bath for electroplating Zn on Fe and Cu are given.

W. R. Kenn

METALLURGICAL LITERATURE CLASSIFICATION

AKSEL'ROD, Isay Solomonovich; AFANAS'YEV, Mikhail Aleksandrovich; VEYNBLAT, Boris Markovich; GITMAN, Mark Borisovich, kand. tekhn. nauk; DUBROVSKIY, Aleksandr Ivanovich; KAMENTSEV, Vladimir Petrovich; KAMINSKIY, Boris Aleksandrovich, kand. tekhn. nauk; KOLOKOLOV, Nikolay Mikhaylovich; EPSHTEYN, Anatoliy Mordukhovich, prof.; KIRILLOV, V.S., kand. tekhn. nauk, red.; GOLUBKOVA, Ye.S., red.

[Road engineer's manual; the construction of bridges and culverts] Spravochnik inzhenera-dorozhnika; stroitel'stvo mostov i trub. Moskva, Transport, 1965. 735 p. (MIRA 18:7)

1. DUBROVSKIY, A.I.; KAPLAN, R.M.

2. USSR (600)

4. Agricultural Machinery

7. Operation of the PK-1 horse gear designed by the All-Union Scientific Research Institute of Farm Machinery, Engs. A.I. Dubrovskiy, R.M. Kaplan, Sel'khozmashina no. 5, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953. Unclassified.

DUBROVSKIY, A.I.

ANDREYEV, Nikolay Petrovich; FAYNSHTEYN, Iosif Samuilovich; DUBROVSKIY, Aleksandr Ivanovich; KARAMYSHEV, I.A., red.; VERINA, G.P., tekhn.red.

[Manual on the building of structures] Spravochnik po postroike iskusstvennykh sooruzhenii. Moskva, Gos.transp.zhel-dor. izd-vo, 1957. 539 p. (MIRA 10:12)

(Railroad engineering)

ANDREYEV, Nikolay Petrovich, inzh.; DUBROVSKIY, Aleksandr Ivanovich, inzh.; FAYNSHTEYN, Iosif Samuilovich, inzh.; AKIMOV, I.S., inzh., retsenzent; MITROFANOV, Yu.M., inzh., retsenzent; DONSKOY, V.P., inzh., retsenzent; KARAMYSHEV, I.A., inzh., red.; KHITROVA, N.A., tekhn. red.

[Handbook on the construction of engineering structures] Spravochnik po postroike iskusstvennykh sooruzhenii. Izd.2., dop. i perer. Moskva, Transzheldorizdat, 1962. 511 p. (MIRA 15:12)

(Railroad bridges) (Culverts)

DUBROVSKIY, A.I.

Type of compressor and compressor station for the mining industry. Nauch. trudy MGI no.23:233-243 '58. (MIRA 15:12)
(Air compressors)

DUBROVSKIY, A.I.

New type of compressor for the mining industry. Nauch. trudy Mosk. inst. radioelek. i gor. elektromekh. no.44:136-146 '62. (MIRA 17:9)

GUSAKOV, S.F., insh, red.; NEMIROVSKIY, B.S., kand. tekhn. nauk, red.; DUBROVSKIY, A.I., insh., red.

[Construction specifications and regulations] Stroitel'nye normy i pravila. Moskva, Stroiizdat. Pt.3. Sec.D. ch.2. [Bridges and pipes; regulations for the work organization, execution of work, and acceptance of completed work] Mosty i truby; pravila organizatsii i proizvodstva rabot, priemka v ekspluatatsiiu (SNiP III-D.2-62) 1964. 86 p. (MIRA 17:7)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva. 2. Gostroy SSSR (for Gusakov). 3. Mezhduvedomstvennaya komissiya po peresmotru Stroitel'nykh norm i pravil (for Nemirovskiy). 4. Vsesoyuznyy nauchno-issledovatel'skiy institut transportnogo stroitel'stva (for Dubrovskiy).

DUBROVSKIY, A.Kh., inzh.

Automation and telemechanization of the circulating water supply system in petroleum refineries. Mekh. i avtom. proizv. 15 no.7:5-9 Jl '61. (MIRA 14:7)
(Automation) (Pertroleum refineries)

LUBROVSKIY, A.Kh.

"Overall automation and remote control of the water supplying systems of industrial enterprises." Prom. energ. 17 no.8:52-53 Ag '62. (MIRA 16:4)

(Water supply engineering) (Electric power plants—Water supply)

BALOVNEV, V.I.; GRONDA, V.I., red.; DUBROVSKIY, A.Kh., red.

[New methods of calculating the resistance of soils to cutting] Novye metody rascheta soprotivlenii rezaniiu gruntov. St.Shcherbinka, Rosvuzizdat, 1963. 94 p. (MIRA 17:9)

9

CH

DUBROVSKIY, A.M.

structure influencing the structure and resistance to corrosion of phosphate coatings. K. M. Demnich and A. M. Dubrovskiy. J. Applied Chem. (U. S. S. R.) 8, 437-43(in English 444)(1935).—Plates of soft Fe were degreased with a 3% soln. of NaOH and were then phosphatized in a bath contg. a 3% soln. of Parker powder during 1-1½ hrs. at 90-98°. The phosphatization of the Fe surface is improved by smoother surfaces and a continuous agitation of the soln., providing clusters of crystals can be formed. Small-size crystals promote the corrosion resistance of the coating. A. A. Boehtlingk

ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION

DUBROVSKIY, A.M.

KRYANIN, I.R.; LYASS, A.M.; YAKOVLEV, V.O.; DUBROVSKIY, A.M.

Casting blades of hydroturbines of the Tsymlyansk and Gor'kiy hydroelectric power stations. Lit.proizv. no.6:2-7 Je '53. (MLRA 6:7)
(Blades)

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000411420002-7"

DUBROVSKIY, A.M.

Automatic control of sand density in ramming molds on shaking machines. Lit.proizv. no.2 supplement:27-31 '56. (MLRA 9:7)
(Sand, Foundry)

DUBROVSKIY, A.M.

950)

SOV/3795

[illegible] chekhovtsev mashinostroitel'nay promyshlennosti.
Liteynaya [illegible]

[illegible] litseynogo proizvodstva (Advanced Technology of Casting Production) Kiyev, Mashgiz, 1959. 152 p. 6,000 copies printed.

Ed.: V. E. Shadyuk; Tech. Ed.: Ye. V. Brinevskiy; Editorial Board: A. Ye. Artemenko, [illegible] (Resp. Ed.), S. Sh. Shalovskiy, and A. V. Shipuk; Chief Ed. (Instrument Division, Mashgiz): V. E. Shadyuk, Engineer.

PURPOSE: This book is intended for engineering personnel of foundries, and workers of scientific research institutions.

COVERAGE: This book is a collection of articles and papers given by representatives of plants, scientific-research institutes, and [illegible] on problems of advanced methods of production and mechanization of the [illegible] industry at a conference organized by the Kiyev Oblast Board of [illegible] Engineering Societies) of the machine-building industry and [illegible] Engineering of the Academy of Science, Ukrainian [illegible] in centrifugal pipe precision investment casting, [illegible] and casting, use of materials preventing scorching, [illegible] sizes (blanks), and problems of mechanization and [illegible] foundry processes are covered in this book. An article by S. Sh. [illegible] with a new cast iron welding method developed by the author with the assistance of electrowelder G. A. Shvachenko, and called "cold electrowelding of cast iron by means of a metal electrode with an indirect arc action." As the title indicates, the arc acts only indirectly on the welded metal passing between the electrode and the building metal. Such welding leaves shallow fusion of the cast iron. The formation of a carbonic carbon layer is either absent or limited to a very thin layer of not more than 0.2 mm., making for easy mechanical working. No personalities are mentioned. There are no references.

TABLE OF CONTENTS:

AVAILABLE: Library of Congress

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6-22-59

Card 4/6

Dabrovskiy, A.M.

AUTHOR: None given SOV/140-59-4-47/48

TITLE: A Conference on the Accuracy of Machine Building Castings

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1959, Nr 4, pp 233-234 (USSR)

ABSTRACT: A conference on the above subject took place in the Institute of Machine Building of the Academy of Sciences of the USSR on 22-24th April 1957. About 200 representatives of scientific-research institutes, laboratories, universities and largest works from 34 towns participated in the conference. The following papers were read: B.B.G'ulyayev "The present state of studies of the accuracy of castings"; P.M.Akenov "Tasks of investigations of the dependence of the accuracy of castings on technological factors", N.P.Berg "Methods of analytical evaluation of dimensions of castings"; Ye.A.Yerokh'yev "Theoretical and experimental investigations of the accuracy of castings"; I.P.Ivanovskiy - "The system of allowances for mechanical working of castings"; Ye.G.Kopanevich "Methods for the determination of tolerances for dimensions of cast parts"; S.A.Kozyrev "Tolerances for non-ferrous castings produced by various methods of casting"; G.N.Nikol'skiy "Methods of controlling the cleanliness of the surfaces of castings"; I.S.Konstantinov "The influence of stresses formed during casting on the accuracy of castings"; L.Ye.Kosirov "The process of packing moulds as a factor determining the accuracy of castings", [illegible] and [illegible] "Sources of errors in the dimensions of castings caused by specific features of operation of the pattern-mould boxes equipment", [illegible] "Typical deformations of casting moulds", [illegible] "Conditions of making accurate castings in sand moulds", B.P.Ivanov "The influence of the chemical composition of iron on the accuracy of dimensions of castings". G.N.Gromchenko and B.P. [illegible] "Improvement in the accuracy of castings made in pressed sand moulds", V.V.Rychenkov "Experience in increasing the cleanliness and accuracy of large castings", [illegible] and I.I.Ivolkov "On the accuracy of castings made by the lost wax method", I.I. [illegible] "An investigation of the accuracy and surface clean [illegible] of castings made under pressure and by the lost wax method", M.F.Kaplinskiy and B.B.Gul'yayev "The formation of the contour of castings during casting under pressure", K.G.Ivanov, A.A.Dobrovolov and [illegible] "An improvement in the surface quality of castings made under pressure by forming a vacuum the pressure moulds". It was established that studies on the subject of the accuracy of castings are developing too slowly mainly due to lack of coordination in the research work and insufficient number of specialists in the field of mathematics, physics and electronics. In order to develop methods for overall calculations of the accuracy, productivity and economics of casting processes the conference recommended organizing in Moscow, Leningrad and Kiyev (at scientific research institutes and universities) mixed teams consisting of foundry specialists, mathematicians, physicists and economists.

Card 1/3

Card 2/3

DUBROVSKIY, A. M.

PHASE I BOOK EXPLOITATION SOV/5304

Soveshchaniye po teorii liteynykh protsessov. 5th, 1959

Tochnost' otlivok; trudy soveshchaniya (Accuracy of Castings; Transactions of the Fifth Conference on the Theory of Founding Processes) Moscow, Mashgiz, 1960. 206 p. 3,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya.

Ed. (Title page): B. B. Gulyayev, Doctor of Technical Sciences, Professor; Ed. of Publishing House: G. N. Sotelova; Tech. Ed.: A. P. Vorobyova; Managing Ed. for Literature on Hot-Processed Metals: S. Ya. Golovin, Engineer.

PURPOSE: This book is intended for scientific and technical personnel at scientific research institutes, factories, and schools of higher education.

COVERAGE: The book contains 19 reports read at a conference on the accuracy of castings. The conference was organized by the Committee on Processing in Machine Building and sponsored by the Institut mashinovedeniya AN SSSR (Institute of the Science of Machines of the Academy of Sciences USSR). The reports, presented by leading specialists, science workers, and production personnel, discuss the present state of the problem of the accuracy of castings and methods of solving the problems involved. There are 38 references, mostly Soviet.

Card 6/7

DUBROVSKIY, A.M.

Effect of thermal deformation of mold and core mixtures on the quality of castings. Lit. proizv. no.6:21-25 Je '60. (MIRA 13:8)

(Sand, Foundry) (Thermal stresses)
(Foundries--Quality control)

KRYANIN, I.R., doktor tekhn.nauk; DUBROVSKIY, A.M., insh.

Studying and developing new techniques for casting powerful hydraulic turbine blades. [Trudy] TSNIITMASH 97:183-208 '60. (MIRA 13:8)
(Founding)
(Hydraulic turbines--Blades)

AP50,8147 UR/0128/65 [illegible]
621.766.029

[illegible]ly, A. M. (Engineer), Makeyev, [illegible]

[illegible]al device for determining the [illegible] [illegible]ion, [illegible]ity, and linear shrinkage of alloys

[illegible] proizvodstvo, no. [illegible], 1965, [illegible]

[illegible] deformation, alloy strength, [illegible] linear [illegible] temperature testing, steel mechanical [illegible]

[illegible]rticle describes the design, [illegible] of a [illegible] for the determination of strength, [illegible] linear [illegible]y samples from the liquidus temperature [illegible] a simil[illegible] of the cooling curves and measurements [illegible] formation. [illegible] the authors of the article together [illegible] and V. S. [illegible] Author's Certificate No. 151493 in [illegible] temperature, [illegible]plied until the sample breaks. The [illegible] recorded on [illegible] and potentiometers and may be visually [illegible] measuring

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measured curves are also given (for [illegible] and 10L).
[illegible] 1 formula and 7 figures.

None

ENCL: 00

OTHER: 000

DUBROVSKIY, A.P.

Effect of certain factors on the penetrability of porous materials. Porosh.met. 4 no.4:10-14 Jl-Ag '64. (MIRA 18:8)

1. Institut metallurgii imeni Baykova AN SSSR, Moskva.

18(5)

AUTHORS: Tsukerman, S. A., Dubrovskiy, A. P. SOV/32-25-2-64/78

TITLE: Graphite Molds for the Production of Samples of Refractory Compounds (Grafitovyye pressformy dlya polucheniya obraztsov tugoplavkikh soyedineniy)

PERIODICAL: Zavodskaya Laboratoriya, 1959. Vol 25, Nr 2, pp 242-243 (USSR)

ABSTRACT: The heavily strained parts of molds used at high pressing temperatures (2500°) have to consist of compact, densely packed graphite. The graphites ARV and A (according to the nomenclature of the Moskovskiy elektrodniy zavod (Moscow Electrode Plant)) are highly suitable for this purpose, since the type ARV has a compression strength of at least 250 kg/squ. cm, and the A type a compression strength of at least 350 kg/squ. cm. Moreover, a mold for pressing cylindrical samples (Fig) is described, having, as a special feature, an interlayer below the piston as well as the thin-walled cylinder which represents the mold proper. For prism-shaped samples another mold without interlayers is used. Molds of the described design have been used for manufacturing cylindrical samples with diameters ranging from 7 to 30 mm, and heights

Card 1/2

Graphite Molds for the Production of Samples of Refractory Compounds

SOV/32-25-2-64/78

between 5 and 20 mm, as well as prism-shaped samples of the dimensions 5 by 5 by 40 mm. The temperatures during the pressing operation ranged from 2500 to 2600°, the specific pressure was 300-400 kg/squ. cm. There is 1 figure.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov, Academy of Sciences, USSR)

Card 2/2

89612

S/020/61/136/002/016/034
B019/B056

18.6200

AUTHORS: Bal'shin, N. Yu., and Dubrovskiy, A. P.

TITLE: Some Problems of the Hydrostatic Pressing of Powders

PERIODICAL: Doklady Akademii nauk SSSR, 1961, Vol. 136, No. 2, pp. 332-335

TEXT: The authors investigated the hydrostatic pressing (pressure effect from all sides) of electrolytic copper powder at pressures of from 10 - 60 kg/mm^2, further of blow-steel powder, electrolytic nickel powder, and reduced molybdenum powder. The copper, nickel, and molybdenum powders had a grain size of < 10μ, the iron powder of < 90μ. The specimens were pressed to rods in elastic jackets whose initial measurements were 11 mm diameter and 65 mm length, and whose final measurements were less by 25 - 30 %. Specimens were also produced by means of the conventional pressing method for reasons of comparison. In Fig. 1, the densities γ of the specimens as function of the pressure p for the two pressing methods are shown, Fig. 2 graphically represents log(p) = f(logγ) for both pressing methods. As it turned out, the specimens in hydrostatic presses

Card 1/5

89612

Some Problems of the Hydrostatic Pressing of Powders

S/020/61/136/002/016/034
B019/B056

have a hardness uniformly distributed in all directions, whereas the specimens produced in the conventional manner, have an anisotropy of the hardness distribution. This anisotropy is all the greater, the harder the metal and the less is the pressure. The difference in the behavior of soft and hard metals in pressing is, according to the authors' opinion, in direct interrelation with the friction of the various metals on the walls of the press molds. Experiments, however, did not confirm this opinion. It is considered to be more probable that the particles of a soft metal harden more quickly than those of a hard metal when being pressed. There are 2 figures, 2 tables, and 3 Soviet references.

ASSOCIATION: Institut metallurgii im. A. A. Baykova Akademii nauk SSSR (Institute of Metallurgy imeni A. A. Baykov of the Academy of Sciences USSR)

PRESENTED: August 3, 1960, by A. A. Bochvar, Academician

SUBMITTED: July 12, 1960

Card 2/5

Some Problems of the Hydrostatic Pressing of Powders

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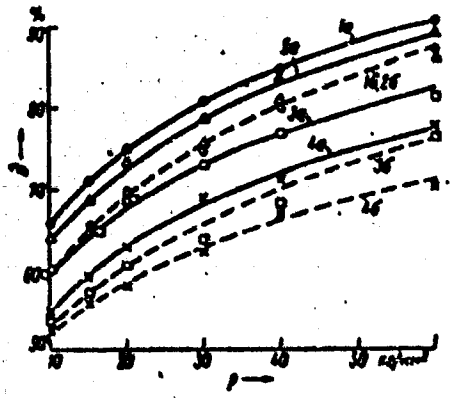

Card 3/5

Some Problems of the Hydrostatic Pressing of Powders

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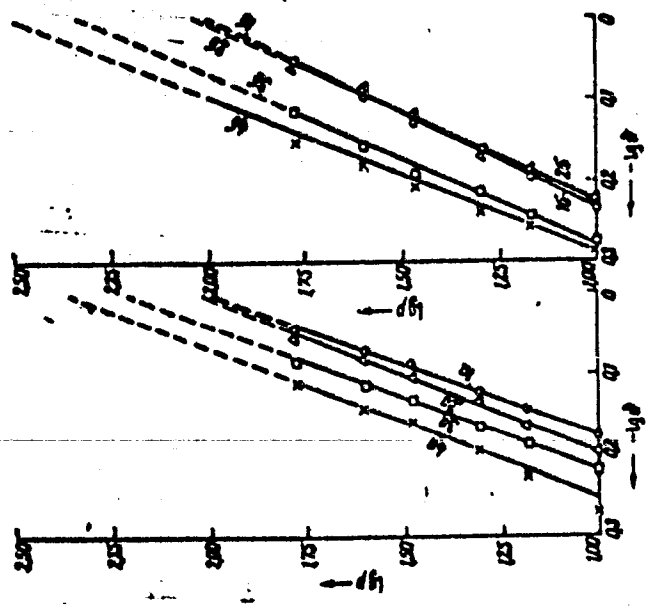

Card 4/5

89612

Some Problems of the Hydrostatic Pressing of Powders

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Legend to Fig. 1: 1a, 2a, 3a and 4a holds for Cu, Fe, Ni and Mo in hydrostatic pressing, 1b, 2b, 3b and 4b in conventional pressing.
Legend to Fig. 2: Analogous to Fig. 1.

Card 5/5

EWP(1)/EWT(m)/EWP(s)/EWP(t)/ETI IJP(c) JD

ACC NR: AP6017103 (A) SOURCE CODE: UR/0226/66/000/001/0046/0049

51
50
B

AUTHORS: Dubrovskiy, A. P. (Moscow); Isayev, P. A. (Moscow)

ORG: none

TITLE: Investigation of gas-permeability of porous materials

SOURCE: Poroshkovaya metallurgiya, no. 1, 1966, 46-49

TOPIC TAGS: metal powder, powder alloy, ~~powder metal sintering~~, porous metal, porosity, gas permeability, sintered metal

ABSTRACT: The effect of porosity and the particle size and shape of sintered monel metal and bronze on the gas-permeability of the sinters was investigated. The particle size varied from 50 to 400 μ and the porosity from 12 to 33%. The monel metal specimens were sintered at 1200C, and the bronze specimens at 750C. The gas-permeability was determined by measuring the resistance offered by the specimens to the passage of compressed air. The experimental results were treated after the method of Yu. L. Il'in (Izv. vyssh. uch. zav. MVO SSSR, No. 1 Aviatsionnaya tekhnika, 1959),

$$A = B_0 + B_1 G,$$

where A, B_0, and B_1 are given by

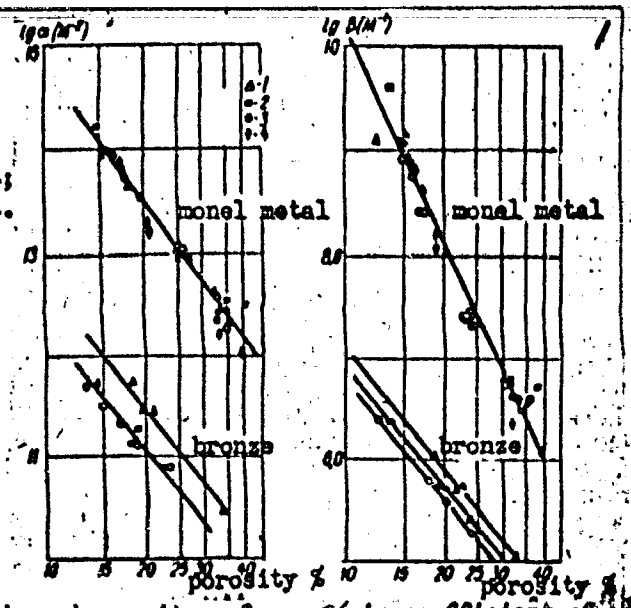
$$A = \frac{(P_1 - P_2)(P_1 + P_2)}{2RTh\mu}; \quad B_0 = \alpha\mu; \quad B_1 = \frac{\beta}{g}.$$

Here P_1 and P_2 are the pressures in front and behind the porous specimen, h is the thickness of specimen, R, T, and μ are the gas constant, temperature, and viscosity

Card 1/2

ACC NR: AP6017103

Fig. 1. Dependence of the resistance coefficients α and β on the porosity of the specimen. 1 - 160—200 μ; 2 - 200—250 μ; 3 - 250—315 μ; 4 - 315—400 μ.



of the gas respectively, G is gas flow through a unit surface, α is coefficient of viscous resistance, and β is the inertial coefficient of resistance. The experimental results are presented graphically (see Fig. 1). It was found that the size of spherical particles affects the values of α and β, whereas the size of granular particles had no effect on the latter. Orig. art. has: 2 graphs and 8 equations.

SUB CODE: 11/ SUBM DATE: 27May65/ ORIG REF: 002/ OTH REF: 001

Card 2/2 ad

DUBROVSKIY, Artem Petrovich, inzh.; TSUKERMAN, Samariyn Aronovich, kand. tekhn. nauk; KORNILOV, Ivan Ivanovich; MINTS, Rakhil' Samuilovna; SHOBIK, L.Ye., inzh., red. red.; SOROKINA, T.M., tekhn. red.

[Laboratory press for hot compaction. Vacuum dilatometer for the study of metal powder sintering processes] Laboratornyi press dlia goriachego pressovaniia. Vakuumnyi dilatometr dlia izucheniia protsessa spekaniia metallicheskikh poroshkov. [By]I.I.Kornilov i R.S.Mints. Moskva, Filial Vses. in-ta nauchn. i tekhn.informatsii, 1958. 9 p. (Peredovoi nauchno-tekhnicheskii i proizvodstvennyi opyt. Tema 4. No.M-58-64/1) (MIRA 16:3)

(Powder metallurgy—Equipment and supplies)

TSVETKOV, V.N., kand. tekhn. nauk, dotsent; SHATOKHIN, N.K., insh.; DUBROVSKIY, A.S., insh.

Quality of needle wire. Mauch. trudy MTILP no.24:146-149 '62. (MIRA 16:7)

(Wire--Testing)

DUBROVSKIY, A.S.

TSVETKOV, V.N.; DUBROVSKIY, A.S.

Qualitative tip bending of footwear tacks. Leg.prom. 17 no.8:18-21 Ag '57. (MIRA 10:10)

(Shoe industry)

DUBROVSKIY A.S.

TSVETKOV, V.N.; DUBROVSKIY, A.S.

New design of sole nails. Leg. prom. 18 no.4:38-39 Ap '58.
(Shoe manufacture) (MIRA 11:4)

TSVETKOV, V.M.; DUBROVSKIY, A.S.

Nail fastening of porous rubber soles. Leg.prom. 18 no.12:18-19 D '58. (MIRA 11:12)

(Shoe manufacture)

DUBROVSKIY, A.S.; KUSNER, B.A.; PETROV, N.I.; YANTOVSKAYA, P.A., red.

[Catalog and handbook on sewing equipment] Katalog - spravochnik po shveinomu oborudovaniiu. Moskva, Pt.2. 1963. 69 p. (MIRA 17:5)

1. Moscow. TSentral'nyy institut nauchno-tekhnicheskoy informatsii legkoy promyshlennosti.

DUBROVSKIY, A.T.

USSR/Cultivated Plants - Fruits. Berries. L-6

Abs Jour : Ref Zhur - Biologiya, No 16, 25 Aug 1957, 69344

Author : Dubrovskiy, A.T.
Inst :
Title : Frost in Orchards.

Orig Pub : Gredineritul, vieritul shi vineritul Moldovei, 1956, No 2, 31-32; Sadovodstov, vinogradarstvo i vinodelie Moldaviy, 1956, No 2, 29-30

Abst : It is recommended that when frost is expected during the night, a careful sprinkling of trees and soil with water should be conducted during the evening at a temperature of 5 to 7°. If the temperature becomes lower the sprinkling should be repeated. From 3 to 12 m^3 of water per hectare should be used. The orchards were not harmed in frosts down to -- 8°.

Card 1/1

DUBROVSKIY, A. V.

Instruments for intrathoracic resection of the ribs. Grud. khir. no.5:120-122 '61. (MIRA 15:2)

1. Iz legochno-khirurgicheskogo otdeleniya (zav. - kandidat meditsinskikh nauk R. E. Koran, nauchnyy rukovoditel' - chlen-korrespondent AMN SSSR prof. L. K. Bogush) Moskovskoy gorodskoy TSentral'noy klinicheskoy tuberkuleznoy bol'nitsy (glavnyy vrach - zasluzhennyy deyatel' nauki prof. V. L. Bynis)

(RIBS—SURGERY)
(SURGICAL INSTRUMENTS AND APPARATUS)

UVAROVA, O.A., kand.med.nauk; DUBROVSKIY, A.V. (Moskva)

Plasmocytoma of the lung. Klin.med. no.4:127-130 '62.
(MIRA 15:5)

1. Iz Moskovskoy gorodskoy tsentral'noy klinicheskoy tuberkuleznoy bol'nitsy (glavnyy vrach - zasluzhennyy deyatel' nauki prof. V.L. Rynis, nauchnyy rukovoditel' khirurgicheskogo otdeleniya - chlen-korrespondent AMN SSSR prof. L.K. Bogush) i patomorfologicheskogo otdeleniya Instituta tuberkuleza AMN SSSR (dir. - chlen-korrespondent AMN SSSR prof. N.A. Shmelev).
(LUNGS--TUMORS)

SEVEROV, V.S. (Moskva, ul. 6-go kilometra, d.2, korp. 2, kv.17); UVAROVA, O.A.; ZEMSKOVA, Z.S.; YANCHEVSKAYA, A.A.; DUBROVSKIY, A.V.

Plasmocytomas of the lung. Vestn. khir. Grekov. 90 no.4:14-17 Ap'63 (MIRA 17:2)

1. Iz khirurgicheskoy kliniki (zav. - prof. L.K.Bogush), patomorfologicheskoy laboratorii (zav. - prof. V.I.Rumik) Instituta tuberkuleza AMN SSSR.

DUBROVSKIY, A.V., dotsent

Mechanism of the formation of vaginal hernia in boars and its prophylaxis. Veterinariia 42 no.12:59-60 D '65. (MIRA 19:1)

1. Voronezhskiy sel'skokhozyaystvennyy institut.

DUBROVSKIY, A.Z., dotsent

New apparatus for studying olfaction; tonometric olfactometer. Vest. oto-rin. 16 no.4:69-71 Jl-Ag '54. (MLRA 7:8)

1. Iz kliniki bolezney ukha, gorla i nosa (zav. zaslushennyy deyatel' nauki USSR prof. Ya.A.Shvartsberg) Kiyevskogo meditsinskogo instituta.

(OLFACTORY TRACT, physiology,
*olfactometry, appar.)

USSR/Human and Animal Physiology. The Sensory Organs T-13

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65798

Author : Dubrovskiy A.Z.
Inst : -
Title : The State of the Olfactory Analyzer in Hypertension and Hypertensive States

Orig Pub : Vestn. oto-rino-laringologii, 1957, No 5, 108-112

Abstract : Olfaction was examined in 70 patients with hypertension by means of a tonometric olfactometer. The thresholds of olfactory and trigeminal sensitivity were determined in units of tonometric pressure. In patients with a transitory phase (stage I of the illness) of hypertensive disease, a considerable increase in the thresholds wasnoted, and the threshold of trigeminal sensitivity was higher than that of olfactory sensitivity. In the second stage of the illness with a more constant high blood pressure, fewer individuals with normal thresholds were found. In stage III, in which there are con-

Card : 1/2

USSR/Human and Animal Physiology. The Sensory Organs T-13

Abs Jour : Ref Zhur - Biol., No 14, 1958, No 65798

sodermb;e changes on the cardiovascular system, (all the way to sclerotic changes), a threshold of olfactory sensitivity approaching normal was found in only a single patient. A normal threshold of trigeminal sensitivity was not encountered in this group. A sharp increase in the threshold of trigeminal sensitivity and the perception of odors was noted in individuals with focal brain symptoms. The degree of disturbance to the olfactory analyzer in general was not parallel to the height of the arterial pressure, but corresponded rather with the severity of the clinical picture. Changes in olfactory function are often an early sympton of hypertensive disease.--F.I. Munladze.

1. Iz kafedry bolezney ukha, gorla i nosa (zav. Zasluzhennyy deyatel' nauk prof. Ya.A. Shvartsberg) Kuyybyshevskogo meditsinskogo instituta.

Card : 2/2

DUBROVSKIY, A.Z., dotsent

Peripheral vascular system following disorders in nasal respiration of varying etiology. Zdrav. Turk. 5 no.2:27-29 Mr-Ap '61. (MIRA 14:5)

1. Iz kafedra bolezney ukha, gorla i nosa (zav. - prof. Ya.A. Shvartsberg) Kiyevskogo meditsinskogo instituta imeni A.A.Bogomol'tsa.
(RESPIRATORY ORGANS--DISEASES) (CAPILLARIES)

DUBROVSKIY, A. Z., dotsent; DRACHEVA, Z. N., assistent

State of olfactory and trigeminal sensitivity in acute disorders of the cerebral circulation. Vest. otorin. no.2:22-28 '62. (MIRA 15:2)

1. Iz kafedry nervnykh bolezney (zav. - deystvitel'nyy chlen AMN SSSR prof. B. N. Man'kovskiy) i kafedry bolezney ukha, gorla i nosa (zav. - prof. Ya. A. Shvartsberg) Kiyevskogo meditsinskogo instituta.

(CEREBROVASCULAR DISEASES) (OLFACTORY NERVE) (TRIGEMINAL NERVE)

GLAZKOV, Yu.Yu.; DUBOVSKIY, B.G.; ILYASOVA, G.A.; KOZLOV, V.I.; SMELOV, V.V.; SHARAPOV, V.N.

Measurement of slow neutron spectra on the physical test stand of the reactor of the I.V. Kurchatov Atomic Power Plant at Beloyarskoye. Atom. energ. 15 no.6:481-485 D '63. (MIRA 17:1)

DUBROVSKIY, B.G.

Safety in the simultaneous protection of high-voltage cables and pipelines. Gaz. delo no.12:30-32 '64. (MIRA 18:2)

1. Ukrgipromez.

DUBROVSKIY, B.G.

Electrolytic corrosion of the inner surfaces of pipelines used as conductors of electric current. Gaz. delo no.1:20-22 '65. (MIRA 18:6)

1. Ukrainskiy gosudarstvennyy institut po proyektirovaniyu metallurgicheskikh zavodov, Dnepropetrovsk.

AP5019803 /0014/0019 39

B

[illegible], G. M.; Dubovskiy, B. G.; Kamayev, A. [illegible] Ya.; [illegible] M.; Popov, G. A.; Talanchuk, Yu. D.

[illegible]ency of heterogeneous absorbers in homogeneous [illegible] water reactors

[illegible]aya energiya, v. 19, no. 1, 1965, 1[illegible]

[illegible]ater moderated reactor, homogeneous nuclear [illegible] neutron flux, [illegible]er, reactor control, nuclear reactor [illegible]

[illegible] authors investigated the effect of vari[illegible] the value [illegible] mass of homogeneous uranium-water reac[illegible] agents were [illegible] reactors having no reflectors and with [illegible] with bottom reflectors up to 25 cm thick. The [illegible] in cylindrical steel tanks with wa[illegible] 0Kh18N9T [illegible] The absorbing rods were made of [illegible] clad in [illegible], or else of water-filled cadmium tubing [illegible] stainless [illegible]ficiency of the absorbing rod is [illegible] [illegible]lume or critical height of the reactor [illegible] and without the [illegible] efficiency of an isolated rod or of a [illegible] was measured as

AP5019805

the absorber dimension and of the [illegible] in the [illegible] are presented in the [illegible] articles. [illegible]erimental data are compared with the [illegible] the two-group [illegible]ference between the results is on the [illegible] decreasing the [illegible] the group increases the critical [illegible] contributes to [illegible] reactor. The use of steel cladding [illegible] rods con- [illegible] rod efficiency. Orig. art. has: 8 [illegible] and 2 [illegible]

(02)

ENCL: 00

OTHER: 000

DUBROVSKIY, B.G.

Anodic protection of underground structures in soils with a high electric resistance. Zashch. met. 1 no.5:546-550 S-O '65. (MIRA 18:9)

1. Ukrainskiy institut po proyektirovaniyu metallurgicheskikh zavodov.

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000411420002-7"

DUBROVSKIY, B.K., insh.

Use of current producing structures to create ice-free spaces in front of the spillway gates of the Novosibirsk Hydroelectric Power Station. Gidr. stroi. 30 no.9:27-30 S '60. (MIRA 13:9)

(Novosibirsk Hydroelectric Power Station--Spillways)
(Ice on rivers, lakes, etc.)

DUBROVSKIY, B.K., inzh.

Operation of the Novosibirsk Hydroelectric Power Station.
Gidr.stroi. 33 no.4:2-6 Ap '63. (MIRA 16:4)
(Novosibirsk Hydroelectric Power Station)

DUBROVSKIY, D.I. [Dubrovsky, D.I.]

On physiological investigation of psychic phenomena. Acta nerv. sup. (Praha) 6 no.4:453-461 '64.

1. Donetskiy meditsinskiy institut, kafedra filosofii.

ZAPRYANOV, Tr.; VANIOV, M. (Plovdiv, Bolgariya); DUBROVSKIY, D.I. (Donetsk); NOVAK, V.G. (Moskva)

Reviews and bibliography. Vest. AMN SSSR 20 no.1:78-87 '65. (MIRA 18:4)

ACC NR: AP6033494 SOURCE CODE: UR/0413/66/000/018/0116/0116

INVENTOR: Zhdanov, K. I.; Dubrovskiy, D. M.; Kazanskiy, B. P.; Kuz'min, A. I.; Kulikov, Ye. I.; Bespechnyy, S. P.; Yevlakhov, L. A.; Meshchaninov, Ye. G.

ORG: none

TITLE: Aircraft-propeller test stand. Class 42, No. 186169

SOURCE: Izobret prom obraz tov zn, no. 18, 1966, 116

TOPIC TAGS: aircraft propeller, ~~aircraft~~ propeller blade, propeller test stand, ~~aircraft maintenance~~, aircraft maintenance equipment, test stand

ABSTRACT: An Author Certificate has been issued for an aircraft-propeller test stand consisting of a pedestal and a propeller hub, equipped with dummy blade roots, and a hydraulic pump which supplies working fluid to the stand's components. To simulate propeller loading without rotation, hydraulic pistons, installed in the pedestal's cylindrical housing, operate through the dummy blade roots to simulate centrifugal force and thrust. To simulate the aerodynamic forces produced by the propeller's transverse inflow, it is equipped with movable hydraulic cylinders which consecutively bend the dummy blade roots. Working fluid is supplied to the hydraulic cylinders through a hydraulic pulser containing spring-loaded plungers; these are consecutively displaced by a cam mounted on the hydraulic pulser's shaft by the use of an eccentri-

UDC: 620.178
629.13.01/06

ACC NR: AP6033494

cally constructed, grooved coupling which assures the alignment of the cam for a certain travel of the spring-loaded plungers.

SUB CODE: 01/ SUBM DATE: 30Nov64/

Card . 2/2

APPROVED FOR RELEASE: 08/25/2000 CIA-RDP86-00513R000411420002-7"

L 13696-66

ACC NR:

SUBM DATE: 11Sep63/ ATD PRESS:

Card 2/2

DUBROVSKIY, D. S., student VI kursa

Effect of dietary fats on blood coagulation. Trudy LSGMI 67: 202-206 '62. (MIRA 15:7)

(FAT) (BLOOD—COAGULATION)

DUBROVSKIY, E.B.

PTUSHENKO, Ye.S.; VINOKUROV, A.A.; DUBROVSKIY, E.B.

Airplane investigation of the numbers, distribution and biology of fish-eating birds in the Sea of Azov. Vop.ikht. no.7:204-208 '56. (MLRA 10:3)

1. Kafedra zoologii pozvonochnykh Moskovskogo gosudarstvennogo universiteta im. M.V. Lomonosova.
(Azov, Sea of—Water birds)

VINOKUROV, A.A.; DUBROVSKIY, B.B.

White-tailed sandpiper in the Northern Caucasus. Priroda 45 no.1:116 Ja '56. (MLRA 9:4)
(Caucasus, Northern--Sandpipers)

DUBROVSKIY, E.B.

VINOKUROV, A.A.; DUBROVSKIY, E.B.

Importance of some fish-eating birds in the fish culture of the southeastern part of the Sea of Azov region. Vop.ikht. no.8:191-202 '57. (MIRA 10:8)

1.Kafedra zoologii posvonochnykh Moskovskogo universiteta imeni M.V. Lomonosova.

(Azov Sea region--Birds--Food)
(Fish culture)

DUBROVSKIY, G., insh.-podpolkovnik; MALOFURIN, I., insh.-podpolkovnik.

Twenty-five ton jack. Tankist no.1:45-47 Ja '58. (MIRA 11:3)
(Lifting jacks)

Dubrovskiy, G.B.

USSR/ Physical Chemistry - Atom B-3

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7139

Author : Batarchukova, N.R. and Dubrovskiy, G.B.
Inst : Not given
Title : The Effect of Argon Pressure on the Reproduction of the Wavelength of the Cd^{114} Red Line in an Electrodeless Discharge

Orig Pub : Optika i spektroskopiya, 1956, Vol 1, No 3, 330-333

Abstract : The interferometric method was applied to the investigation of the effect of argon pressure on the displacement and broadening of the Cd^{114} red line (6438A). It is shown that increasing the argon pressure in the discharge tube leads to a very small increase in the wavelength of the Cd^{114} red line (0.001 cm^{-1}/mm Hf).. The broadening of the red line is approximately 0.0002_4 cm^{-1}/mm Hg.

Card 1/1 - 7 -

DUBROVSKIY, G.B.

SUBJECT USSR / PHYSICS CARD 1 / 2 PA - 1566
AUTHOR MASLAKOVEC, JU.P., POLTINNIKOV, S.A., DUBROVSKIJ, G.B., SUBAŠIEV, V.K.
TITLE P-Silicon Photoelectric Transformers of Solar Energy.
PERIODICAL Žurn.techn.fis, 26, fasc.10, 2396-2397 (1956)
Issued: 11 / 1956

American authors produced photoelements from n-Si-monocrystals by bringing about p-n transitions in these crystals by means of diffusion from the gaseous phase of boron. In a similar manner the authors also attempted to produce the photoelement on the basis of p-silicon. This is of practical importance, because p-Si is less expensive and more easily obtainable than electron silicon. Sb served as an admixture, and diffusion was from the gaseous phase.
Foils of monocrystalline and polycrystalline p-silicon with a thickness of ~ 1 mm were used for production. After fixing the contacts, the voltampère characteristics for brightness and darkness were recorded. One of the photoelements consisted of a foil of 1 cm^2 area and was produced from monocrystalline p-silicon with ϱ = 5 ohm.cm and τ = 4 microsec. Its voltampère characteristic had well marked saturation domains in the reverse direction. These parts of the voltampère characteristics for brightness which correspond to load were nearly rectangular in shape. The spectral characteristic of this photoelement has its maximum at 700 mμ. The red boundary of sensitivity agrees well with the width of the forbidden zone in the Si.

Furthermore, the load characteristic on the occasion of a solar radiation of 910 watts/cm^2 was recorded and the useful coefficients for different load resistances (and consequently also for various load voltages) were computed. The maximum useful coefficient under conditions such as prevailed on this occasion was 2,8%.

On the occasion of the measuring of the useful coefficient the total incoming energy was always measured by means of a perioheliometer. The electrodes used did not afford a sufficiently low contact voltage, and therefore higher useful coefficients may be expected to be attained as a result of an improvement of contacts. The samples, which were produced from low-resistance polycrystalline silicon (several large crystals on a plate) gave less favorable results compared with those obtained by the samples described above. Their maximum useful coefficient remained below 0,6%.

It would be of great practical interest to discover a possibility of producing transformers with a useful coefficient of from ~ 1 to 2% of comparatively impure silicon (with $\varrho < 1$ ohm.cm).

BOROVIKOVA, R.P. [translator]; DUBROVSKIY, G.B. [translator]; OKHOTIN, A.S. [translator]; PEDYASH, N.M. [translator]; MASLAKOVETS, Yu.P., prof., doktor fiz.-mat.nauk, red.; SUBASHIYEV, V.K., kand.fiz.-mat.nauk, red.; VISKOVA, M.V., red.; SMIRNOVA, N.I., tekhn.red.

[Semiconductor transformers of radiant energy] Poluprovodnikovye preobrazovateli energii izlucheniia; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1959. 407 p. (MIRA 12:4)
(Semiconductors) (Photoelectricity)

Dubrovskiy, G.B.

81945
S/181/60/002/04/03/034
B002/B063

24.7700

AUTHOR: Dubrovskiy, G. B.

TITLE: Quantum Yield of CdTe Photocells With p-n Junctions in the Ultraviolet Region of the Spectrum

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 4, pp. 569-570

TEXT: The author examined the spectral sensitivity of photocells prepared by diffusion of gold from the surface into n-type CdTe. The shape of the curve of spectral sensitivity is largely dependent on the mode of preparation. Numerous photocells were examined. The dependence of the product of quantum yield Q and "collection" coefficient (koeffitsiyent sobiraniya) α on the energy of the incident photons between 2.5 and 5.0 ev is reproduced for three photocells (Fig.). $Q \cdot \alpha$ drops between 2.5 and 3.5 ev and rises again between 3.5 and 5.0 ev. As α drops with rising radiation frequency, the effect observed means that the number of electrons increases if the photon energy exceeds the width of the forbidden band for CdTe. An energy excess of about 2.0 ev is necessary for impact ionization. This is 0.5 ev more than the width of the forbidden band in the case of CdTe.

Card 1/2

81945

Quantum Yield of CdTe Photocells With p-n Junctions in the Ultraviolet Region of the Spectrum

S/181/60/002/04/03/034
B002/B063

The author thanks B. Ya. Moyzhes for his discussion, and Yu. P. Maslakovets for having suggested this subject. There are 1 figure and 3 Soviet references.

ASSOCIATION: Institut poluprovodnikov AN SSSR, Leningrad (Institute of Semiconductors of the AS USSR, Leningrad)

SUBMITTED: October 7, 1959

Card 2/2

Dubrovskiy, G.B.

82547

S/181/60/002/007/027/042
B006/B060

24.7700

AUTHORS: Dubrovskiy, G. B., Subashiyev, V. K.

TITLE: Determination of the Recombination Constants by the Spectral Characteristics of Photocells With p-n Junction. III

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 7, pp. 1562-1571

TEXT: In the previous paper I (Ref. 1) the authors had made an analysis of the spectral characteristics (determinations of the short-circuit current per incident quantum, the absorption coefficient k of the material, the reflection coefficient r of the surface of the photocell and the quantum yield of the internal photoeffect) of photocells with p-n junction, namely, for p-type silicon (with a hole concentration of $\approx 5.10^{14} cm^{-3}$ at 300°K). The present paper makes use of the results obtained there for the determination of the recombination constants for a silicon photocell, obtained by diffusion of donor impurities into p-type silicon. The k and r values utilized for the purpose were determined in specific experiments. The method of measurement and the apparatus are first described briefly. Fig. 1 is a schematic reproduction of the circuit for the

Card 1/3

82547

Determination of the Recombination Constants by the Spectral Characteristics of Photocells With p-n Junction. II

S/181/60/002/007/027/042
B006/B060

measurement of the quantum yield. The results obtained from the investigations are illustrated in diagrams: Fig. 1 shows $k(\lambda)$, Fig. 3 shows $r(\lambda)$ for three different photocells, Fig. 4 shows the short-circuit current as a function of λ, and Fig. 5 shows $\alpha(\lambda)$ (α denotes the separation coefficient). Figs. 6 and 7 likewise show $\alpha(\lambda)$ for other photocells. The recombination constants are calculated by strictly complying with Part I of the paper, where also the definitions for the quantities are given. The hole diffusion length L_p can be determined from the relation $\Delta = L_p \frac{s}{D_p} \operatorname{sh} \frac{l}{L_p} + \operatorname{ch} \frac{l}{L_p}$ (where l denotes the depth of the p-n junction, which amounts to a few microns in most cases), and the electron diffusion length L_n in the p-type region can be determined from the longwave part of the characteristic. The following is obtained for a photocell designated with No. 3: $L_p = 2.2\ \mu$, $L_n = 0.2\ \mu$ (characteristics: Figs. 3, 6, 9), for a photocell of the type $\Phi 2$(F2): $L_p = 10\ \mu$, $L_n = 8\ \mu$ (Figs. 3, 5, 8). The curves $\alpha^*/k = f(k)$ and $\alpha^* = f(1/k)$ are given for several photocells and

Card 2/3

82547

Determination of the Recombination Constants by the Spectral Characteristics of Photocells With p-n Junction. II

S/181/60/002/007/027/042
B006/B060

discussed. (α^* - experimental separation coefficient). All of the numerical results are tabulated in a table (p. 1569): l, L_p, L_n, and S/D_p for the types F2, Ф3 (F3), Ф4 (F4) as well as 11 laboratory-produced cells. The results are finally discussed and some error sources are examined. The authors thank G. Ye. Pikus and G. L. Bir for their discussions. A. V. Ditman is mentioned. A ЗМР-2 (ZMR-2) monochromator calibrated in absolute energy units with a standard thermocouple of the VNIIM, was used for measuring the quantum yield of the photocells. There are 10 figures, 1 table, and 7 references: 5 Soviet and 2 US.

ASSOCIATION: Institut poluprovodnikov AN SSSR Leningrad (Institute of Semiconductors of the AS USSR, Leningrad)

SUBMITTED: July 9, 1959

Card 3/3

SUBASHIYEV, V.K.; PETRUSEVICH, V.A.; DUBROVSKIY, G.B.

Determining recombination constants form the spectral distribution curve of photoconductivity. Fiz. tver. tela 2 no.5:1022-1024 My '60. (MIRA 13:10)

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TITLE: Determination of the Recombination Constants and the Depth of the Position of the p-n Junction From the Spectral Characteristics of Photocells

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 8, pp. 1978 - 1980

TEXT: The authors theoretically developed a method of determining various constants of a semiconductor with a p-n junction. For this purpose it is necessary to illuminate a p-n photocell with $l_p > l_n$, L_n, L_p from the side of the n-type layer with light of two wavelengths, λ_1 and λ_2. The absorption coefficients of the n-type layer are indicated by k_1 and k_2. The straight lines representing $j_{s.c.} = f(1/k)$ cut the axes at two different points each, from the positions of which it is possible to determine the constants. $j_{s.c.} = \frac{qN}{\Delta}(1 + \frac{s}{D_p}\frac{1}{k})$; $a = -D_p/s$, $h = qN/\Delta$.

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